

WHAT IS CLAIMED IS:-

5 1. A digital photofinishing system comprising a digital processor, a
printer and means for feeding print media to the printer from a roll of the
print media. the digital processor being arranged to receive digitised data
that is representative of a photographic image and to process the data in a
manner to generate a printer drive signal that is representative of the
10 photographic image, the printer being coupled to the digital processor and
arranged to process the drive signal and effect page-width printing of the
photographic image on the print media as it is fed directly to the printer
from the roll, and the printer incorporating at least one print head
assembly that is arranged to provide for printing of the print media with a
15 feed rate up to 2 metres per second.

2. A digital photofinishing system as claimed in claim 1 wherein the roll
of print media is provided by way of a replaceable cartridge.

20 3 A digital photofinishing system as claimed in claim 2 wherein the
cartridge is arranged to be mounted removably in juxtaposition to the
printer and wherein the cartridge incorporates means for coupling with a
print media feed drive mechanism I .

25 4. A digital photofinishing system as claimed in claim 1 wherein at
least one printing fluid is provided for the printer by way of at least one
replaceable printing fluid cartridge.

30 5. A digital photofinishing system as claimed in claim 4 wherein the
printing fluid cartridge is arranged to be mounted removably in
juxtaposition to the printer.

6. A digital photofinishing system as claimed in claim 1 and comprising:

5 a primary cartridge that is arranged to be mounted removably in juxtaposition to the printer, the primary cartridge housing the roll of print media to be fed to the printer and incorporating means for coupling with a print media feed drive mechanism, and

at least one refillable secondary cartridge carried by the primary cartridge, the secondary cartridge containing printing ink to be delivered to the printer.

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7. A digital photofinishing system as claimed in claim 6 wherein the roll of print media is removably mounted to a tubular core of the primary cartridge and wherein the at least one secondary cartridge is removably located within the tubular core.

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8. A digital photofinishing system as claimed in claim 1 wherein the digital processor is arranged to receive said digitised data from an input source selected from a scanning device, a computer disk, a digital camera output, a digital camera memory card, a digital file and an internet
20 connection.

9. A digital photofinishing system as claimed in claim 1 wherein said digitised data is input to the digital processor as a standardised image compression signal and processed as JPEG files.

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10. A digital photofinishing system as claimed in claim 1 wherein the printer comprises at least one print head assembly.

11. A digital photofinishing system as claimed in claim 10 wherein the
30 printer comprises two confronting, spaced-apart print head assemblies.

12. A digital photofinishing system as claimed in claim 11 wherein the print head assemblies are arranged selectively to direct printing fluid onto at least one face of print media from the roll of print media.

5 13. A digital photofinishing system as claimed in claim 11 wherein each print head assembly comprises at least one print head module, each of which comprises a unitary arrangement of:

a) a support member,

10 b) at least four micro-electromechanical integrated circuit print head chips, each of which has a plurality of nozzles to and from which the printing fluid is delivered,

c) a fluid distribution arrangement mounting each of the print head chips to the support member, and

15 d) a connector for connecting electrical power and signals to each of the print head chips.

14. A digital photofinishing system as claimed in claim 13 wherein:

a) the print head assembly has a width within the range 150 to 1250 mm,

20 b) the number of print head chips per print head is within the range 8 to 64,

c) the number of nozzles per printing fluid color per print head chip is greater than 1000,

d) the nozzle activation rate is within the range 20 to 50 Hz, and

25 e) the drop size of printing fluid is within the range 1.5 to 5.0 picolitre per nozzle.

15. A digital photofinishing system as claimed in claim 13 wherein the at least one print head module is removably located in a channel portion of a casing and wherein the casing contains electrical circuitry for controlling
30 delivery of electrical power and drive signals to the print head chips by way of the connector.

16. A digital photofinishing system as claimed in claim 1 and further comprising a drier means located in series with the printer, the drier means being arranged to receive printed media directly from the printer and comprising:

5 a) guide rollers for transporting the print media through the drier means, and

b) at least one blower arranged to direct drying air onto at least one face of print media as it is transported through the dryer means.

10 17. A digital photofinishing system as claimed in claim 1 and further comprising a slitter means located in series with the printer, the slitter means being arranged to receive printed media following its passage through the printer, to transport the printed media in a longitudinal direction away from the printer and to slit the printed media In the
15 longitudinal direction of transportation of the printed media.

18. A digital photofinishing system as claimed in claim 16 wherein the slitter means comprises:

20 a) guide rollers for transporting the print media through the slitter means,

b) spaced-apart slitting blades mounted on rotatable shafts, and

c) a rotatable, selectively positional turret supporting the rotatable shafts.

25 19. A digital photofinishing system as claimed in claim 17 and further including a guillotine mounted to the slitter means, The guillotine being selectively actuatable to cut the print media at selected intervals.

30 20. A digital photofinishing system as claimed in claim 1 wherein the processor and the printer are mounted to a support structure and wherein a primary cartridge containing a replaceable said roll of the print media is removable mounted to the support structure.

21. A digital photofinishing system as claimed in claim 20 wherein the support structure includes a compartment and the primary cartridge is removably located in the compartment.

5 22. A digital photofinishing system as claimed in claim 20 wherein print media feed means are located in the primary cartridge and drive means are provided on the support structure and are arranged to couple with the feed means to effect feeding of the print media through the printer when the primary cartridge is mounted to the support structure.

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23. A digital photofinishing system as claimed in claim 20 wherein a paper feed drive mechanism is mounted to the compartment and is arranged to engage a said roll of the print media.

15 24. A digital photofinishing system as claimed in claim 22 wherein a door is provided in a wall portion of the primary cartridge and wherein the door is arranged to be opened to enable the paper feed drive mechanism to engage the roll of print media.

20 25. A digital photofinishing system as claimed in claim 24 wherein the paper feed drive mechanism comprises a pivotal carrier, a first drive motor arranged to impart pivotal drive to the carrier, a primary drive roller mounted to the carrier and arranged to engage the roll of print media when the door in the primary cartridge is open, and a second drive motor
25 arranged to impart rotary drive to the primary roller.

26 A digital photofinishing system as claimed in claim 22 wherein the print media feed means include a drive roller and a pinch roller, and wherein the drive means comprises a third drive motor which is mounted
30 to the support structure.